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DEVELOPMENT OF A TEACHER RATING SCALE

TO IDENTIFY UNPOPULAR CHILDREN

BY

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Abstract

There is considerable evidence that unpopularity as a child is related to the occurrence of later behavior problems. Furthermore, an intervention program has been developed to help low status children gain acceptance among their peers. The results of the intervention show that children participating in this program can make lasting gains in popularity, thereby decreasing the probability of later behavior problems. The identification of these "at risk" children, however, is time consuming and cumbersome. Though presently problematic, teacher ratings show promise as a method of assessing unpopularity in children.

A total of 269 second grade students and 13 teachers from 6 Chicago area Catholic elementary schools participated in the study. Two types of sociometric data were collected from each student. First, every second grader rated each student in their classroom on how much they liked to play with him/her. Next, the children nominated their three best friends and their least liked classmates. After all the sociometric data were collected, each teacher completed a 26 item Teacher Rating Scale for every student in the class. For the analysis, the children were assigned to one of five groups based on the sociometric data: positive stars, positives, negatives, negative stars and isolates. A factor analysis of the Teacher Rating Scale revealed

three factors: aggression, isolation and dependence. Of these factors only the first two were significant as exhibited by a step-down F-test. According to discriminant analysis, the first factor best identified the rejected children, or negative stars, while the second factor best identified the isolates. The items that best predict whether a child is of low status will be retained in a revised version of the scale. Once the reliability and validity of the reduced item test have been verfied, a fast and efficient means of identifying unpopular children will be available for use.

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Development of a Teacher Rating Scale to Identify Unpopular Children

Several studies have uncovered a relationship between childhood unpopularity and the development of later behavior problems. Stengel (1971) found suicide to be related to a lack of peer acceptance, and a similar relationship has been noted for delinquency (Roff, Sells, and Golden, 1972). Ullmann (1957) showed that teachers and peers were the best predictors of whether or not a student would later drop out of school. Their predictions were based on popularity ratings. Poor peer group adjustment early in life is also related to "bad conduct" discharges from the military (Roff, 1961). Appearance on a community-wide psychiatric register has also been found to be related to unpopularity as a child. Children identified in their first three years of school as vulnerable for the development of mental health problems later received significantly more psychological care than other children. The children "at risk" were likely to be rejected by their peers and were most reliably tagged by teachers and peers using low peer acceptance as their criterion (Cowen, Pederson, Babigian, Izzo, and Trost, 1973). In another study, the school records of thirty adults hospitalized for schizophrenia were compared to ninety control subjects. The preschizophrenic boys were characterized as "unsocialized aggressive", were less conforming and more emotionally unstable.

The preschizophrenic girls, on the other hand, were characterized as overinhibited and participated the least in social activities (Watt, Stolorow, Lubenshy and McClellant, 1970). These behaviors are associated with unpopularity as rated by peers (Bonney and Powell, 1953).

It is possible that these later behavior problems can be avoided if intervention occurs early to increase the acceptability of unpopular children by their peers. Oden and Asher (1977) examined the effects of a particular intervention program on socially isolated third and fourth grade students. They coached the children on social skills relevant to friendship making in a game situation. The coaching involved instructions about participation in a game or activity, cooperation with peers, communication with others and validating or supporting playmates. After a four-week training period children in the coached group were significantly more desired as playmates than children who had been paired with peers in a game situation but not coached or children in the control group. Even more encouraging, these children showed continued gains on a "play with" rating scale when assessed again one year later. Low peer acceptance, however, seems to endure if no intervention is made (Asher and Hymel, in press).

It appears that early intervention may brighten the futures of unpopular children. A relatively short training period on the social skills necessary for making friends can have positive, lasting effects. Prior to inte vention, "at risk" children must

be identified. However current methods are cumbersome, requiring responses from all children in a classroom. Other methods are time consuming or limited in scope. Teacher ratings show promise but in their present form are only a moderately reliable means of classifying low status children. What is needed is an easy, efficient and reliable way to identify these unpopular, "at risk" children. The development of an effective assessment technique requires that first, methods presently used be evaluated and second, dimensions relevant to popularity be examined.

Methods of Assessment

Current assessment techiques include behavioral assessment, sociometric measures and teacher judgments.

Behavioral Assessment. Asher and Hymel (in press) reviewed a variety of methods used to identify behaviors that are related to unpopularity. These techniques include naturalistic observation, peer assessment, analog situations and simulation methods.

Most naturalistic observation studies are based on rate of interaction rather than quality of interaction. However, researchers have found little relationship between frequency of interaction and popularity (Deutsch, 1974; Gottman, 1977; Hymel and Asher, 1977; Jennings, 1975). In addition, Jennings (1975) demonstrated that social knowledge has more to do with

acceptability than frequency of interaction. Another problem with naturalistic observation is that although it may be used reliably to identify unpopular preschool children it fails to identify unpopular elementry school children. Possibly, the types of friendship-making behaviors readily observed in the preschool classroom are less likely to occur in the more highly structured elementry education classroom (Asher and Hymel, in press). Or, older children may focus on behavioral dimensions that are less commonly observable (Scarlett, Press and Crockett, 1971). Finally, observation methods usually miss low frequency behaviors ,such as temper tantrums,that may be related to low acceptability among peers.

Peer assessmeent uses "inside observers", namely a child's peers. This method may be an open-ended verbal or written description pertaining to what a child is like or reasons why the examinee likes or dislikes someone. Or it may be a structured interview or questionnaire examining a child's perception of peer behavior. The peer assessment technique has several advantages: a) it identifies dimensions that are psychologically significant at different age levels; b) children's judgments of peers are likely to be based on more hours of observation than will those of an outsider; and c) children take into account low frequency behaviors. However, the technique is vulnerable to the halo effect: children will assign positive qualities to those they like or negative qualities to to those they dislike. Furthermore, the technique requires a time-consuming, detailed

analysis by the investigator.

For the analog technique the experimenter arranges a special situation to gain greater control over possible influencing variables, to produce greater standardization across groups for easy comparison, and to observe infrequently occurring behaviors. However, the analog technique requires a complex coding system and is limited to specific behaviors related to popularity. A more global method is preferable for the initial assessment.

Finally, simulation methods provide information about the children's social knowledge not reflected in their behavior. The child is given a hypothetical situation and asked what someone might do in that situation. This technique is based on the notion that a child's behavior does not necessarily indicate competence or lack of it and that behavior may not lead to unpopularity, but rather unpopularity may lead to the identifying behaviors. But disliked children exhibit social skill deficits even when the assessment is made independently of their peer group (Asher, Renshaw, Geraci and Dor, Note 2). As a result, determination of the directionality of the relationship between behavior and peer acceptance in actual behavioral settings would lend credence to the results of simulation methods.

Sociometric Measures. Sociometric techniques are probably the most widely used and reliable means of determining the acceptability level of a child in reference to his or her peers.

By definition, sociometric measures provide a valid index for assessing the attraction between individual members of a group. Sociometric scores for children tend toward greater stability on both friendship choices and acceptance with increasing age. By the time most children reach the sixth grade their choices are for the most part fixed (Busk, Ford and Schulman, 1973). There are several different types of sociometric measures each tapping a different dimension of social status, namely nomination measures and variations of them, and rating scales (Asher and Hymel, in press).

The nomination method was developed in 1934 by Moreno (Asher and Hymel, in press). According to this technique, children are asked to nominate a certain number of classmates based on a specified criterion. These criteria can be positive or negative. For example , children may be asked with whom they most like to play or least like to work. The score a child earns equals the total number of nominationss received from peers on each dimension. An advantage of the nomination method is that scores tend to be stable over time, at least for elementry school age children. Busk et. al. (1973) found the the following test-retest corelations over an eight week period for positive nomination scores: fourth grade, r=.76; sixth grade, r=.84. Test-retest correlations drop considerably over a longer period of time. Roff et. al. (1972) found a correlation of .52 over a one year period for positive nomination scores and a correlation of .38 over a one year period for negative scores. On the

preschool level, however, nomination scores are only moderately reliable even after a short interval (Moore and Updegraff, 1964). McCandless and Marshall (1957) revised the technique so that preschoolers would only have to point to a photograph of a peer rather than recall his or her name. By simplifying the task these investigators hoped to raise the test-retest reliability. But the results show the test-retest correlation is still much lower than correlations computed using older children. An even more serious drawback of the nomination method is that it is limited to the few children who are nominated. The investigator receives data on only a small proportion of the class: those who are very popular or very unpopular. Information about the children between the extremes is sparse or nonexistent.

The rating scale procedure is more encompassing. Children are given a list of all their classmates and are required to rate each of them according to specified criteria. For instance, children may be asked to rate how much they like to play with each of their peers on a scale of one to five. With this method the investigator receives an indication of children's attitudes toward each group member, not just those who are very popular or unpopular. Furthermore, ratings yield somewhat higher test-retest reliabilties than nomination scores. Oden and Asher (1977) found the test-retest reliability for eleven classes of third and fourth grade students over a six week period were .82 for a "play with" rating scale , .84 for a "work with" rating scale and .69 for positive nomination scores. Since a child's

score on the rating scale is an average of all the ratings received from a large number of peers, a change in one or two ratings would have little effect on the overall score. A single change in the number of nominations received , on the other hand, could have a considerable effect on the distribution of scores. Therefore, ratings would be more likely to be similar from one testing to the next, producing a higher test-retest correlation.

A final advantage of rating scales over nomination methods is a high test-retest reliability with preschool children. Asher, Singleton, Tinsley and Hymel (1979) compared the reliability of positive and negative picture nominations with picture ratings. A group of four-year-old children chose three peers they most liked to play with. They also rated all their peers by putting their pictures in one of three boxes labelled with a happy, sad, or neutral face. The reliability coefficients over a four-week period were: r=.81 for the rating scale, r=.56 for the positive nomination method and r=.42 for the negative nomination technique.

Evidence suggests that the different types of sociometric measures reveal different facets of a child's friendship status. For example, positive nomination scores indicate how many group members have best friends while a rating yields an overall level of acceptability among peers (Asher and Hymel, in press). One child may have no best friends but nevertheless be very well liked. Thus, both positive nominationss and ratings are needed to distinguish this child from another who has no best friends

and is disliked.

Furthermore, positive and negative nomination methods do not test the same dimension. Hartup, Glazer and Charlesworth (1967), using a picture nomination technique on two classrooms of preschoolers, showed that the correlates of acceptance differed from the correlates of rejection. More specifically, giving positive reinforcement was significantly related to acceptance but not rejection and giving negative reinforcement was significantly related to rejection but not acceptance.

The distinction made between different types of low status children requires that both positive and negative nomination techniques be used. Neglected children receive few or no positive and negative nominations. Rejected children may also receive few or no positive nominations , but in addition, receive several negative nominations (Asher and Hymel, in press). Therefore, because sociometric status is a multidimensional phenomenon, several different sociometric methods should be combined when classifying children.

Teacher Judgments. The last method of assessment to be reviewed requires the classroom teacher to classify children for their judged level of acceptability among their peers. A variety of techniques has been used by teachers ranging from nominations and general categorization to more specific behavior checklists. Marshall and McCandless (1957) found social acceptance in free

play is moderately predicted by both sociometric score and teacher judgments. In addition, a child's choice of best friend and teacher judgment of best friend agree with those from children's free play. But McCandless and Marshall (1957) later found that teachers differ in their accuracy of judgments on children's best friends.

Horowitz (1961) showed a low yet significant correlation between positive picture nominations and both teacher best friend ratings and actual free play behavior. For the study, teachers listed a best friend for each child and the strength of their relationship: strong, medium or weak. These ratings were compared to sociometric scores categorized as strong, medium or weak. Those categorized as strong had the highest coincidence with teacher ratings. Thus, teachers can best identify students with a close best friend but have difficulty identifying weaker friendships.

Bonney (1943a) had three teachers place their fifth grade students in five categories: highest, above average, about average, below average, and lowest group. Teachers placed about ninety percent of the children in the correct or adjacent quintile in comparison to the quintile derived from peer judgments. However, individual teachers vary markedly in their ability to judge the sociometric status of their students (Gronlund, 1950). The few teachers in the study by Bonney (1943a) may have been exceptionally perceptive in their judgments.

Subsequently, Bonney (1947) used a larger sample. He asked

high school students to choose their two best friends. He then placed them into three groups: those who received three or more choices into the high, those who received one or two into medium and those who received no choices into the low group. Thirteen teachers were asked to put students in groups based on how many choices they thought each had received. When teachers did not know, they marked "unable to judge". Forty-four percent of all the teacher ratings fell into the unable to judge category. For the remaining ratings the average accuracy was forty-five percent for the high and middle groups and twenty-eight percent for the low group. The teachers felt fairly confident about judgments on approximately half the students, and less than half of those judgments were accurate.

Gronlund's (1950) study comparing teacher ratings and sociometric scores revealed further weaknesses in teacher judgments. Teachers ranked each sixth grade student with, separate rankings for girls and boys, in the order which she judged they would be accepted by their classmates based on her observance of preference of play, work, and seating companion. These rankings were compared to positive nomination scores received by each child on each criterion. Teachers were also asked to list the three students they most preferred and the three students they least preferred in their classroom. Gronlund found that teachers vary in their accuracy of judgments of sociometric status. Teachers were less accurate in their judgments of children's sociometric choice of play companion than

work or seating companion. Furthermore, teachers may be biased in their judgments based on how well they like the student. Teachers tended to overjudge the sociometric status of the children they most preferred and underjudge the sociometric status of children they least preferred. The more biased the teacher was in the direction of her preference the less accurate were her judgments of sociometric status.

Despite the only moderate reliability of teacher judgments of peer acceptance, this method shows promise as a means of easy identification. Other studies show that teachers can readily identify specific behaviors related to sociometric status. Bolstad and Johnson (1977) had teachers rate children as best, average or worst behaved in the classroom based on specific behaviors. A high test-retest reliability was found for identification of children by teachers as least well behaved. Furthermore, teacher ratings on classroom behavior were convergent on the assessment of the children's actual classroom behavior. Lesser (1959) found a high significant correlation between peer group ratings and teacher observation of specific aggressive behaviors. If the important behaviors related to peer acceptance are identified and operationaally defined, teachers should be able to accurately rate children on these criteria suggesting a simple reliable means of identifying unpopular children.

To summarize, methods for behavioral assessment and sociometric measures are troublesome as means of identification,

especially for large populations. Observation and sociometric measures, though currently the dominant assessment techniques, present many problems for the investigator. To classify a child by naturalistic observationn requires many hours of observation. But other children in the classroom must also be assessed, demanding a substantial investment of time before an interventation could begin, Sociometrics, though more practical than observation as an identification method, also place a burden on the investigator. Data must be collected from all the children in the classroom. Absences and parental refusal to grant permission for their children's participation can complicate assessment. On the other hand, if teachers could rate children on a few behaviors important to popularity, identification of low status children would be easy and efficient.

Behaviors Related to Peer Acceptance

Behaviors related to peer acceptance may be broken down into four general categories: behaviors related to personality traits, peer interactions, social knowledge and cognitive factors. The behaviors associated with these components appear to be related to popularity in varying degrees.

Personality Traits. One element of popularity is personality. A variety of personality traits have been shown to

relate to whether or not a child will be accepted by his or her peers. Popular children fall at the more socially desirable end of a trait dimension while unpopular children occupy the more negative end. Kuhlon and Lee (1943) studied sixth, ninth and twelfth grade students. They found that the children who received the largest number of friendship choices were also judged as being most popular, cheerful, happy, enthusiastic, able to enjoy jokes, and were initiators of games and activities. Jennings (1943) compared the behaviors of girls who received few positive nominations and girls who received many nominations from their peers. The girls who scored low on friendship were quarrelsome, complaining, nervous and aggressive. In contrast, the girls who scored high on friendship were characterized as having an even disposition and having initiative. Olson (1949) obtained similar results. Children with many friends were classified as good natured, quiet, friendly, well adjusted and dependable. Children with few friends were classified as ill, sulky, exhibiting conduct problems, bossy and shy.

As mentioned previously, however, low status children are not a homogeneous group. Unpopular children may be neglected, aloof from or rejected by peers (Asher and Hymel, in press). Northway (1944) studied fifth and sixth grade students with low sociometric status and characterized three different personality types which correspond to the above three types of low status children respectively.

Neglected children were classified as listless, aloof children as quiet, retiring and socially uninterested and rejected children as noisy, rebellious and socially ineffective. Gottman (1977) examined ignored (neglected) children and found that they received the lowest scores on peer acceptance. Furthermore, they scored high on a set of shy, anxious and fearful behaviors. He also observed that neglected children frequently "tuned out" when alone. More popular children, on the other hand, are less likely to be alone during free play or activity periods (Bonney and Powell, 1953).

Therefore, it may be possible to distinguish between popular and unpopular children based on personality traits. Low status children can be further divided into groups on the basis of personality characteristics. Then behaviors related to various traits can be rated by the teacher for each child as a means of classification. Personality traits seem to consist of three dimensions: aggressiveness, anxiety and shyness. Popular children seem to score high on the positive end of each dimension. They are good natured, well adjusted and outgoing. Unpopular children seem to score high on the negative side. Furthermore, these low status children can be differentiated based on which one or two or three of the dimensions they score high on. For example, neglected children score high on the shyness and anxiety dimensions. Aloof children appear to be shy and rejected children would probably be rated as highly aggressive and slightly anxious. Therefore, how teachers rate

children on aggressive, anxious and shy behaviors will help classify children as either popular, aloof, neglected, or rejected.

Peer Interactions. The way in which the child interacts with his/her peers may also influence social status. Furthermore, it appears to be the quality not the quantity of social interaction that determines popularity. No relationship exists between the relative frequency of peer interaction and peer group acceptance (Gottman, 1977). But in general, positive peer interactions have been found to relate to acceptance (Marshall and McCandless, 1957) and negative peer interactions relate to rejection (Gottman, 1977).

Those studying peer interactions have considered four broad categories: voluntary participation in a peer group, degree of cooperation and helpfulness, effectiveness of communication, and of support. In a review of the literature Asher, Renshaw and Gercaci (1980) found children who are accepted by the peer group are more likely to participate in peer group activities, are more cooperative and helpful, communicate more effectively and are more friendly and supportive of their peers (Asher, Oden and Gottman, 1977; Hartup,1970; Moore, 1967). Participation is defined as playing with other children and paying attention. Cooperation is operationalized as taking turns and/or sharing materials with peers, while communication involves talking with

and listening to others. Support is given by offering help or encouragement (Asher, Renshaw and Geraci, 1980).

Bonney and Powell (1953) found that popular children paricipate and cooperate more with the peer group than unpopular children. These children were observed in free play, activity periods and controlled classroom situations. Bonney and Powell showed that popular children make more voluntary contributions to their peer group, are less likely to be alone during free play or activity periods, frequently engage in some form of cooperative, voluntary group participation and smile more than unpopular children. Jennings (1943) examined the relationship between cooperation, communication, and popularity. The results showed that girls with many positive nominations were more cooperative and girls with few positive nominations were more quarrelsome. Unpopular girls also impaired effective communication be interfering with the peer group's activities and exhibiting attention-seeking behavior.

Hartup, Glazer and Charlesworth (1967) studied the relationship between support and acceptance. Two classrooms of preschool children were observed for peer reinforcement and both positive and negative nomination scores were obtained. Positive reinforcement was defined as giving attention and approval, showing affection and personal acceptance, being submissive or presenting tokens. Negative reinforcement was defined as refusing to submit or cooperate, withholding positive reinforcement, ignoring overtures from others, interfering with

the peer group's activities, showing ridicule and disapproval, placing blame or tattling, and attacking peers either physically or by threats. Obviously, there is much overlap between support and the other three types of peer interactions.

Hartup et. al. (1967) found that social acceptance was significantly related to giving positive reinforcement but not negative reinforcement, while rejection was significantly related to giving negative reinforcement but not positive reinforcement. Children received more positive reinforcement from liked rather than disliked peers but children did not receive more negative reinforcement from disliked that liked peers. Overall, more positive than negative reinforcement was received from both liked and disliked peers. Thus, popular children seem to offer more positive support to their peers than unpopular children. Yet unpopular children do not appear to be that much more negatively supportive. Perhaps negative peer interactions, though contributing to status, are not as important a factor as positive interactions.

Lesser (1959) looked more specifically at the relationship between aggression (as negative reinforcement) and peer group acceptance. Seventy-four white, lower class boys in the fifth and sixth grades received positive and negative nomination scores to determine sociometric status. The "Guess Who" technique was employed to measure aggression. According to this method, children are given a list of descriptions and then asked to name one or more of their peers that fit each description. Lesser

described five categories of aggressive behavior:

1. provoked physical aggression: to physically attack or injure after provocation
2. outburst aggression: to display an uncontrolled "temper tantrum"
3. unprovoked physical aggression: to physically attack or injure without provocation
4. verbal aggression: to verbally attack or injure
5. indirect aggression: to attack or injure indirectly through another person or object

The results indicated a negative correlation between aggression and popularity. While provoked physical aggression was relatively approved of, verbal and indirect aggression were strongly disapproved of by children. Unpopular children tend to be more aggressive than popular children and they are more likely to exhibit verbal or indirect aggression than other types of aggressive behavior.

Thus, the quality of peer interactions appears to influence peer group acceptance. Participating, cooperating, communicating, and positively reinforcing are all related to being popular. Failure to interact in these ways contributes to unpopularity. Apparently sociometric status is due more to a lack of positive peer interaction than an abundance of negative peer interaction though negative interactions do relate to rejection, as seen by the relationship between certain types of aggression and unpopularity. Because peer interactions are readily observable, classroom teachers should easily be able to

rate children on behaviors related to peer group participation , cooperation, communication, and support.

Social Knowledge. Asher, Renshaw and Geraci (1980) have hypothesized that the degree of social competence a child possesses influences his or her acceptance among peers. Or possibly, contrary to what Asher et. al. believe, unpopular children do have appropriate and well developed ideas about how to interact with peers in various situations but for some unknown reasons do not act on that knowledge. Assuming that children's behavior is not necessarily regulated by their social knowledge, at least in the case of low status children, ideas about what to do in differing circumstances should be examined independent of the normal peer group and with minimum performance demands.

This approach was used by Gottman, Gonzo and Rasmusson (1975) to show children who were well liked by their peers are also knowledgeable on a how-to-make-friends task, while less desired children were not as aware of how to make friends. Ladd and Oden (1979) studied children's ideas about helpfulness with third and fifth graders. They had each child look at three cartoons in which one of the pictured children needed help. The children were then asked what they would do to aid the needy child, and how would they want to be helped if they were the distressed child. Ladd and Oden (1979) found the responses from the helpee and/or helper across the three different situations

were similar, indicating shared knowledge of peer norms on the proper helping strategies in a variety of social situations. However, low status children gave more unique responses to the hypothetical situations than their peers. Unpopular children appear to be less aware of peer norms of helpful behavior. In addition, helpfulness nominations are highly related to measures of peer acceptance and friendship. Thus, the amount of social knowledge a child has at least in terms of helpfulness and how to make friends seems to influence his or her acceptance among peers, lending support to the Asher et. al. (1980) hypothesis.

A study by Asher and Renshaw (Note, 1), which examined social knowledge more generally,, also strengthens the Asher et. al. (1980) argument for a relationship between social competence and popularity. They showed sixty-five kindergarten children nine differennt hypothetical situations requiring some communication or action by one of the pictrued children. Basically, there were three different types of situations. The first involved initiation of social relations with other children. The second looked at maintenance of already established social relationships, and the third set of circumstances required management of conflict between peers. The subjects were asked what he or she would do in this situation.

After categorizing and sorting the responses, Asher and Renshaw (Note, 1) found that despite the similarity on the three most common answers from both the popular and unpopular children the two groups could be differentiated based on social knowledge.

Low status children were more likely to be inappropriately negative. These negative responses sometimes suggested the use of physical aggression, especially in conflict situations. High status children were more likely to use prosocial and sophisticated strategies in all three situations. In contrast, unpopular children showed less sophistication in handling the everyday tasks of childhood. Their answers were more vague and lacking in specificity. Furthermore, low status children were more likely to suggest seeking an authority figure as a solution to problems with which they should have been able to cope on their own. Seemingly, a lack of ideas about initiating and maintaining relationships, plus managing conflict in social relationships relates to acceptance level.

In the same study, Asher and Renshaw (Note, 1) also looked at assertiveness, relationship enhancement and effectiveness . An assertive response was defined as more active than passive, typically involving self-initiative, and could be prosocial or antisocial in nature but was not synonomous with being aggressive. A relationship enhancing response was characterized as any response likely to maintain or enhance a positive relationship between peers, and an effective response was defined as one responsive to the circumstantial demands and likely to solve the existing problem. The investigators found that popular and unpopular children do not differ significantly on assertiveness. However, popular children were significantly more relationship enhancing and effective . Low status children's

ideas were both less effective in social problem solving and less likely to form successful relationships with peers than those of high status children.

Apparently, children's social behavior is regulated by their social knowledge and social competence, and is related to popularity. Studies show low status children have fewer appropriate ideas about how to act in a variety of situations than do higher status peers. Social knowledge thus may be another factor teachers can use to identify unpopular children by rating each child on specific behaviors related to social competence.

Cognitive Factors. The relationships of several different cognitive factors to popularity have also been studied: egocentric speech, intelligence, academic success and creativity. Of the elements listed only some are related to popularity and some only at particular points of development.

In the case of egocentric communication a curvilinear relationship to friendship has been suggested (Deutsch, 1974; Rubin, 1972). Deutsch (1974) tested sixty white middle class girls to determine if there was any relationship between the child's ability to take the view of the other and popularity. Deutsch found that egocentric communication was related to the amount of social interaction but not to sociometric friendship status. Since there is no relationship between frequency of peer

interaction and acceptance (Gottman, 1977), one might conclude that there is no relationship between egocentric speech and sociometric status in preschool children. Rubin (1972), however, did find a relationship between egocentric communication and popularity for kindergarten and second grade students. For the study, ten boys and ten girls in each of the following grades were tested: kindergarten, second, fourth, and sixth. Rubin found that kindergaten and second grade students' egocentric communication was significantly related to friendship. Yet no relationship existed between egocentric communication and friendship for fourth and sixth grade children. Thus, the ability to take the role of the other in kindergartenn and second grade may help children make and keep friends but has little or no effect before or after this period.

Other studies have shown that intelligence and academic achievement alone do not influence popularity. But if peer acceptance is related to intelligence in combination with creativity, clearcut distinctions in status can be made.

Bonney (1943b) looked at the constancy of and interrelationships between social acceptance, mutual friendships, intellectual brightness and academic achievement. From grades two to four all measures except mutual friendship remained constant. As expected, a significant relationship was found between social acceptance and mutual friendships. IQ was significantly related to academic achievement. But there was no relationship between social acceptance and mutual friendship on

the one hand and IQ and academic achievement on the other. Therefore, social success does not seem to be a consequence of intellectual brightness or academic achievement.

Yet, Wallach and Kogan (1972) found that if children are classified along the independent dimensions of intelligence and creativity, four types of children could be identified each with a different social acceptance level. The high creativity-high intelligent children are the most popular and the high creativity-low intelligent children are the most unpopular. Low creativity-high intelligent children tend to remain aloof while low creativity-low intelligent children are the most socially extroverted.

In terms of cognitive factors then, IQ and academic success have little value for identifying "at risk" children because these factors are not related to acceptability. But kindergarten through second grade teachers may be able to classify low status children based on behaviors related to egocentric communication and role taking abilities. Finally, though doubtful, teachers could possibly identify unpopular children by determining their creativity-intelligence type.

Summary. Popularity is related to certain types of personality traits, peer interactions, social knowledge and cognitive factors. Certain behaviors associated with these components are readily observable in the classroom. If teachers

could rate children on the most important of these behaviors, low status "at risk" children could quickly and easily be identified for placement in an intervention program. The following is a list of behaviors linked to low status. The relative importance of these behaviors to acceptance is yet to be determined.

TABLE OF BEHAVIORS RELATED TO LOW SOCIOMETRIC STATUS

I. Personality Traits
   - A. Quarrelsome, aggressive, complaining, ill, sulky, bossy, conduct problems
   - B. Nervous, anxious
   - C. Shy, quiet, retiring, socially uninterested, "tuned out"

II. Peer Interactions
   - A. Lack of voluntary peer group participation
     1. Not playing with others
     2. Not paying attention
   - B. Noncompliance
     1. Refuse to cooperate or submit
     2. Withhold aid to peers
   - C. Ineffective communication
     1. Interfering with peer group activity
     2. Exhibiting attention seeking behavior
   - D. Lack support of peers
     1. Withhold positive reinforcement
     2. Show ridicule and disapproval
     3. Place blame or tattle
     4. Exhibit verbal and indirect aggression
     5. Ignore overtures from others

III. Social Knowledge
   - A. A larger number of unique solutions to problems concerning helping behavior
   - B. Give inappropriately negative solutions to everyday social problems
     1. Use physical aggression in conflict situations
     2. Unnecessarily appeal to authority
   - C. Lack sophistication and vague in social problem solving
   - D. Less relationship enhancement
   - E. Ineffective

IV. Cognitive Factors
   - A. Egocentric communication in kindergarten through second grade
   - B. High creativity-low intelligence

Factors Related to Test Development

The above listed behaviors suggest the dimensions along which teachers should rate children to determine level of popularity. But how should the teacher rating scale be tested to yield a reliable assessment method and what are some factors relevant to its development?

To construct a valid teacher rating scale of social competence of children, it will probably be best to determine its structure by comparing it to sociometric techniques. If ratings and both positive and negative nomination scores are used then popular, aloof, neglected and rejected children can be differentiated on the teacher rating scale by determining which behaviors as rated by teachers are related to each type of child as defined by sociometric measures. This distinction could be valuable in determining which low status children are at risk and what type of intervention program would be most effective for that type of child.

Two issues relevant to the development of a teacher rating scale are age and sex differences in children's view of friendship. Several studies have shown that younger children look at concrete behaviors in choosing their friends while older children use a more abstract basis. Scarlett, Press and Crockett (1977) found that younger children tended to use more personal and concrete constructs in describing their peers while older children use more abstract descriptions. Furthermore, when young children evaluate kindness they look at the outcomes of actions

but older children also consider intentions (Baldwin and Baldwin, 1970). A three stage model of friendship determinants has been developed based on these observations. First, children develop friendships with their playmates or children with whom they have contact frequently. Whether the friendship is formed depends on how rewarding the association is. Later, children will choose friends with mutual interests. These friendships are based on normative expectations. Finally, children base friendships on mutual sharing of thoughts, interests or feelings (Damon, 1977; Bigelow, 1977). Thus when devising a teacher rating scale, the age of the children to be classified will in part determine the behaviors rated.

Hymel and Asher (1977) have suggested that boys and girls use some what different criteria when evaluating popularity. This would imply that separate teacher rating scales should be devised for males and females. However, Asher and Hymel (in press) show that inclusion of nominations and ratings by opposite sex peers does not greatly alter the distribution of popularity scores based on same sex peer's evaluations. Therefore, it appears that a single scale can be used by teachers for both boys and girls.

Summary

Certain children tend to be unpopular among their classmates and these unaccepted children appear to be more inclined to

develop later behavior problems than their peers. If intervention occurs to increase the popularity of a low status child then the risk of later behavior difficulties may be lessened. Intervention programs have been shown to help unpopular children make lasting gains in acceptability. But before intervention can begin the unpopular children must be identified and several methods of doing so were reviewed. Of those, behavioral assessment and sociometric measures prove to be cumbersome, time comsuming and expensive as a means of identification. Only teacher judgments show promise as an easy and effective way to reveal low status children. At present, however, teacher's ratings of children do not relate sufficiently to sociometric results to warrant their use as a means of evaluating status.

Ideally, a scale should be developed taking age into account, requiring teachers to rate their students on a number of specific behaviors important to popularity. In this paper, elements of personality traits, peer interactions, social knowledge, and cognitive factors were found to influence peer group acceptance. Behaviors associated with these factors could be rated by teachers and compared to a current, reliable means of identifying low status children. Through item analysis, the behaviors relevant to popularity can be determined and the scale can be shortened into a more manageable form. After a series of such adjustments and comparisons, a simple, and reliable teacher rating scale for the identification of unpopular children should result.

METHODS

Subjects. 13 teachers and 269 second grade students from 6 Chicago area Catholic elementary schools participated in this study. The composition of the sample consisted of about half males and half females and about three quarters of the students were white, one quarter black and several subjects were hispanic. Each teacher rated all of his/her students and each child evaluated everyone of his/her classmates. Parents were notified about the nature of the study by a letter sent out by each school's principal. If a child's parents refused to let that child be involved in the research then that child was not rated by the teacher or fellow classmates and did not evaluate others. The classes varied greatly in the number of nonparticipating students. In most classes only one or two students were not allowed to take part, but in two classes, almost a third of the pupils were refused permission to be in the study by their parents.

Procedure. 1. During class time, the teacher gave each second grader a class roster (see Appendix 1). Next to each name was three faces: the face on the left was frowning, the face in the middle was neutral (the mouth is a straight line), and the face on the right was smiling. The children were asked to evaluate each of their classmates on how well they liked to play with that child. If they did not like to play with the child

they put an "X" through the frowing face. If they liked to play with that child they put an "X" through the smiling face. If they didn't care if they played with the child they put an "X" through the middle, neutral face. Each child's name was called in order by the teacher, according to the class roster, and the designated child raised his/her hand while the other children rated him/her.

2. After the ratings were collected, a fresh roster was passed out to the children. This roster did not have the faces on it. The students were then asked to circle the name of their best friend and put a number "1" next to the name. They were also asked to circle the names of their second and third best friends placing the numbers "2" and "3" respectively next to each circle. Next, the students were asked to put an "X" through the name of the child they liked the least and put a number "4" next to it. The names of their second and third least liked classmates were also crossed off and numbered "5" and "6" respectively.

These data were used to compute the affect, positive and negative nomination scores with which each teacher's ratings were compared. Positive affect scores were defined as the total number of simling faces crossed off for each child. Negative affect scores were defined as the total number of frowning faces crossed off for each child. The nomination scores were weighted in the following manner: best friend scored as 3, second best friend as 2, third best friend as 1 for the positive nominations;

least liked classmate scored as 3, second least liked as 2, and third least liked as 1 for the negative nomintions. The weighted nomination scores were totalled for each student yielding a positive and negative nomination score. All four scores were divided by the class size to normalize the data across the classes.

3. After data for the class had been compiled, the teacher completed one Teacher Rating Scale for each student in the class (see Appendix 2). The scale consisted of twenty-six bipolar behavioral items to be rated on a five point scale. For example, teases other children to does not tease other children, and waits to be approached by others to initiates interactions with classmates are the first two items on the scale. These items were derived from the factors believed to be important in determining a child's popularity level. During the test construction process, several people including a second grade teacher reviewed and made suggestions on the first drafts of the scale. The teachers were asked to rate each item based on their observations and impressions of the child during the past month.

4. For the data analysis the children were placed into one of five groups based on their sociometric scores.

Insert Figure 1 about here

The cut-off points were chosen to be the mean ratio scores across

all subjects for each type of sociometric data: positive and negative affect ($\bar{X}$=.4616, s=.1879; $\bar{X}$=.2226, s=.1588), and positive and negative nomination scores ($\bar{X}$=.2665, s=.2563; $\bar{X}$=.2524, s=.2678). The quadrant the student fell into on each graph was used to assign him/her to either the positive stars, positives, negatives, negative stars or isolates (see Fig. 1). A positive star was defined as any child receiving many positive rating and nominations but few or no negative ratings or nominations. Positives scored high on positive affect, low on positive nominations, and low on at least negative affect or nominations. Negatives scored low on at least positive affect or nominations and high on negative affect or nominations. Students who scored high on all dimensions were also placed in the negative group. Negative stars scored high on both negative affect and nominations and low on positive affect. Isolates were allowed some negative ratings but otherwise scored low on all the other sociometric evaluations. Once the children were assigned to groups a factor analysis was performed on the Teacher Rating Scale. The factors derived from this analysis were compared to the sociometric groupings using discriminant analysis.

Results

Intercorrelations. An intercorrelational matrix was computed using affect, nomination and teacher rating scores. The intercorrelations among the sociometric data were about as

expected for the affect scores but somewhat lower than anticipated for the nomination scores. Positive and negative affect scores were highly negatively correlated, r=-.75; while the correlations between the affect and nomination scores were moderate. The correlations of positive affect with positive and negative nomination scores were .46 and -.43, respectively. Negative affect correlated with positive and negative nomination scores at the levels of -.23 and .54. The correlation between positive and negative nomination scores was -.20.

The correlations between the four sociometric scores and teacher ratings are shown in Table 1. Teacher ratings correlated most highly and most often with negative affect.

Insert Table 1 about here

Positive and negative affect scores correlated with the teacher items to about the same degree but in the opposite direction as expected based on the high negative correlation between the affect scores. As Table 1 indicates, only two of the correlations between teacher ratings and affect were insignificant; seventeen correlations of items with positive affect and eighteen correlations of items with negative affect had r's > .30. Positive and negative nomination scores were for the most part weakly or not correlated with the items on the Teacher Rating Scale. Only two teacher items were mildly related

to positive nominations: trying when playing games and being content and happy. Six teacher ratings were moderately associated with negative nominations: teases, is secretive, is defiant in the classroom, destroys other's property, verbally threatens, and fights.

The correlations among the teacher ratings were considerably higher then the other correlations discussed thus far.

Insert Table 2 about here

As seen in Table 2, items that were expected to be highly correlated (e.g. Item 16, hits, kicks, bites other children with Item 24, fights with other children) were generally highly correlated. Items that were not expected to be related (e.g. Item 9, verbally threatens other children with Item 14, is fearful and/or afraid of new things) were not correlated.

Factor Analysis. The pattern of intercorrelations among the teacher ratings suggested an underlying factor structure, and a factor analysis of the Teacher Rating Scale revealed three factors.

The communality approximations were computed using squared multiple covariance. The approximations were all rather high with a range of .46 to .73. About half of the communality approximations fell in the range of .60 to .69.

The three factors were derived by a varimax orthogonal rotation of the factor matrix.

Insert Table 3 about here

Table 3 reveals that many items load highly on Factor I or Factor II but only several of the items related to acceptance load highly on Factor III.

Insert Figure 2 about here

As seen in Figure 2, items that load highly on one factor are for the most part uncorrelated with the other two factors. Thus, the rotation resulted in a simple factor structure.

Discriminant Analysis. For this analysis the three factors from the Teacher Rating Scale were compared to the five groups based on the sociometric data. According to a stepdown F-test only Factors I and II were significant [$F(4,264)=12.20$, $p<.01$ and $F(4,263)=2.49$, $p<.05$, respectively].

Insert Table 4 about here

Factor I best discriminated negative stars and Factor II best discriminated the isolates from the other groups as indicated in Table 4.

The sociometric groupings only accounted for twenty-one percent of the variance in all three factors according to Manova eta-squared.

Discussion

The intercorrelations among the four sociometric scores were of the magnitude and in the direction anticipated from the literature review. The high negative correlation between the positive and negative affect scores was expected because if a child was given many positive ratings he/she would probably not receive many negative ratings due to the restricted nature of the affect scale. For each rating, a child can only receive one positive or one negative evaluation. The affect and nomination scores were moderately associated. A strong relationship between these two types of sociometric measures would be surprising because they are measuring different aspects of acceptance. The affect scores are tapping overall likeability while the nomination scores are indicators of personal friendship status. Lastly, the relationship between the positive and negative nomination scores was weak. Previous research had already verified that positive and negative nomination methods do not seem to tap the same dimension (Hartup, Glazer and

Charlesworth,1967). Since these two scores are apparently not reflections of the same attribute, they do might be expected to show a low correlation.

The correlations between the item scores on the Teacher Rating Scale and the four sociometric scores were at best only moderate. The main concern, however, is how well the teacher ratings predict group placement, not specific sociometric scores. The reasoning is that the social structure of the class is dependent on both affect and nomination scores, rather than any single sociometric score. For example, rejected children tend to receive many negative ratings and negative nominations while isolates may receive some negative evaluations but few or no nominations. Nonetheless, some expected relationships occurred between the teacher ratings and the sociometric scores. For instance, it was anticipated that the positive and negative affect scores would be about equal in magnitude but opposite in sign when related to the teacher ratings because affect is believed to be unidimensional, and this pattern was in fact observed.

The teacher items that had the highest correlations with the sociometric data (e.g. fights, teases, is defiant in the classroom, and is distracted from schoolwork) appears more salient to the teacher because they affect the classroom situation. As a result of these behaviors being more noticeable to the teacher, their relationship to the teacher's ideas about popularity may be more refined than behaviors that are less

salient. In fact, the items that have the lowest correlations with the sociometric scores (e.g. doesn't talk to others, is fearful and/or afraid of new things and waits to be approached by others) do not appear to be important behaviors for classroom order and thus are less likely to be salient to the teacher. The teacher would be expected to be less aware of such behaviors that might in turn relate to acceptance.

Surprisingly, the nine items that had the weakest associations with the affect scores also had the highest factor loadings on Factors II and III. This suggests that teachers are more aware of the aggressive behaviors rather the than isolation and dependent behaviors that underlie likeability. This awareness could also be due to salience. Aggressive behaviors tend to be disruptive to the instructional process. Because these aggressive behaviors are more noticeable, the teacher is likely to have a stronger notion about the behaviors. Furthermore, the highest correlations between negative nomination scores and teacher ratings were on "aggressive" items. Apparently, teachers are also more cognizant of those types of behaviors that underlie friendship.

The weak association between teacher ratings and nomination scores seems to indicate that teachers have difficulty in identifying behaviors related to being chosen as best friend or least liked classmate. Earlier studies attempting to develop assessment techniques given to teachers used friendship nominations as the criterion. The inability of teachers to

identify variables related to friendship status probably accounts for the failure of these previous efforts. In this study, however, the problem was avoided by comparing the teacher ratings to sociometric group rather than to friendship status alone.

For the comparison a factor analysis of the Teacher Rating Scale revealing three orthogonal factors. The items with the highest loadings on Factor I (Aggression) not only dealt with physical and verbal aggression but also with behaviors which, though not specifically aggressive, provoke aggression. Factor II (Isolation) seems to combine an unwillingness to interact or to try to interact with other children and behaviors that make a child an undesirable playmate. The defining items of Factor III (Dependence) concern the child's reliance on the teacher for general support and for help in difficult situations with peers. Being fearful and afraid also appears to be associated with this dependence factor.

Only the first two factors, Aggression and Isolation, are significant according to the discriminant analysis. These two factors are able to discriminate low status children from other groups defined sociometrically. Factor I discriminated the rejected children and Factor II, the isolates, from the other children in the class. Thus, not only can teachers identify behaviors associated with unpopularity as a child, but the teacher can also identify behaviors that distinguish between the different types of low status children.

The preceding evidence indicates that although teachers

can distinguish between sociometric groups, only a small proportion of the variance within the five groups is accounted for by the three factors. The remaining variance could be due to influences that have no bearing on popularity and/or the method used to group the children. Much of the variance within the three factors could be due to variables that are irrelevant to a child's social status. For example, a halo effect could be responsible for some of the factor variance. Research has already shown that teachers tend to overestimate the popularity of the students they most prefer and underestimate the popularity of students they least prefer (Gronlund, 1950). Furthermore, teachers may vary markedly in how they use the rating scale. Though the average rating for every item was about the same, some teacher may have used the whole scale while others used only portions of it. Some teachers may tend to give more extreme ratings while others give fairly neutral ratings. The response selection of individual teachers is being investigated to discover if their possible response biases are potential sources of variance in the factors.

The small amount of explained variance in the factors may also be due in part to the manner in which the children were grouped rather than teacher bias. The decision to utilize the mean ratio score for each sociometric measure as cut-off points for groupings was purely arbitrary. Perhaps a more systematic clustering technique would account for more of the variance in the factors. Presently, blockmodelling is being implemented to

regroup the children. These new groupings will then be compared to the factor structure of the Teacher Rating Scale to determine if a greater percentage of the factor variance can be accounted for using this technique.

Several other analyses are also needed before a revised scale will be available. A cross validation procedure is planned to reveal how well the factors predict group structure. The amount of variance in the groups accounted for by the factors will also be computed. Lastly, the revised form of the scale, which will consist of the most powerful items, will be checked for its reliability and validity on a new sample.

Once the final revised scale is available for use many of the problems associated with current methods of assessment will be avoided. The Teacher Rating Scale in its present form required about a half hour to an hour to complete for an entire class. Since the revised version will probably contain less than half the number of items now included in the scale, teachers would need only a maximum of thirty minutes to evaluate every student. The assessment of a single student would be a matter of minutes. In addition, use of the Teacher Rating Scale avoids some of the ethical objections concerning sociometric techniques. In this study, six teachers refused to participate because they felt having the children give negative evaluations and nominations was objectionable. Many parents also questioned the procedure of having their children take part in the collection of sociometric data. Few, if any, questions related to ethics would

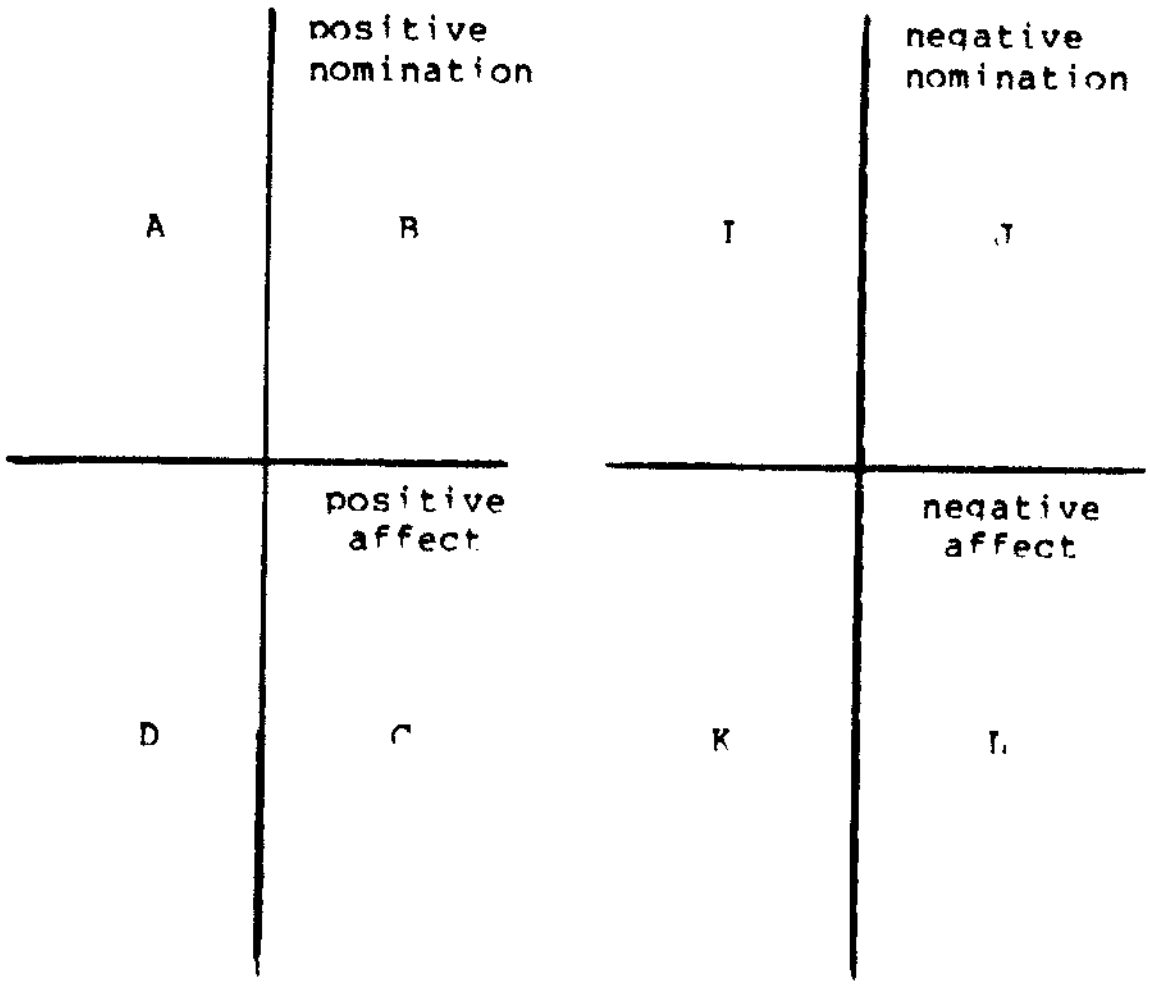
be raised if the Teacher Rating Scale was used to identify unpopular children.

Finally, the ability to discriminate between rejected and isolated children and other sociometric groups can have important ramifications for studies investigating the relationships between behavior problems and childhood social status, and for the construction of programs that attempt to help unpopular children. In the past, neither research nor interventions has distinguished between the two types of low status children: isolates and rejectees. It may be that only rejected children are more prone to develop later problems or the types of problems that are likely to develop differ for rejectees and isolates. Furthermore, the types of training on peer interactions the that child receives should probably be different for each type in order to maximize gains in popularity.

Figure caption.

Figure 1. Group Assignment Based on Sociometric Data

Figure 1



Positive Stars: B and K (Child falls in both quadrants B and K)
Positives: B and I, B and L, C and K, C and I
Negative: A and I, A and L, B and J, C and J, C and L, D and I
Negative Stars: A and J, D and J
Isolates: A and K, D and K, D and L

Figure Caption.

Figure 2. Factor Loadings for Teacher Rating Scale Items

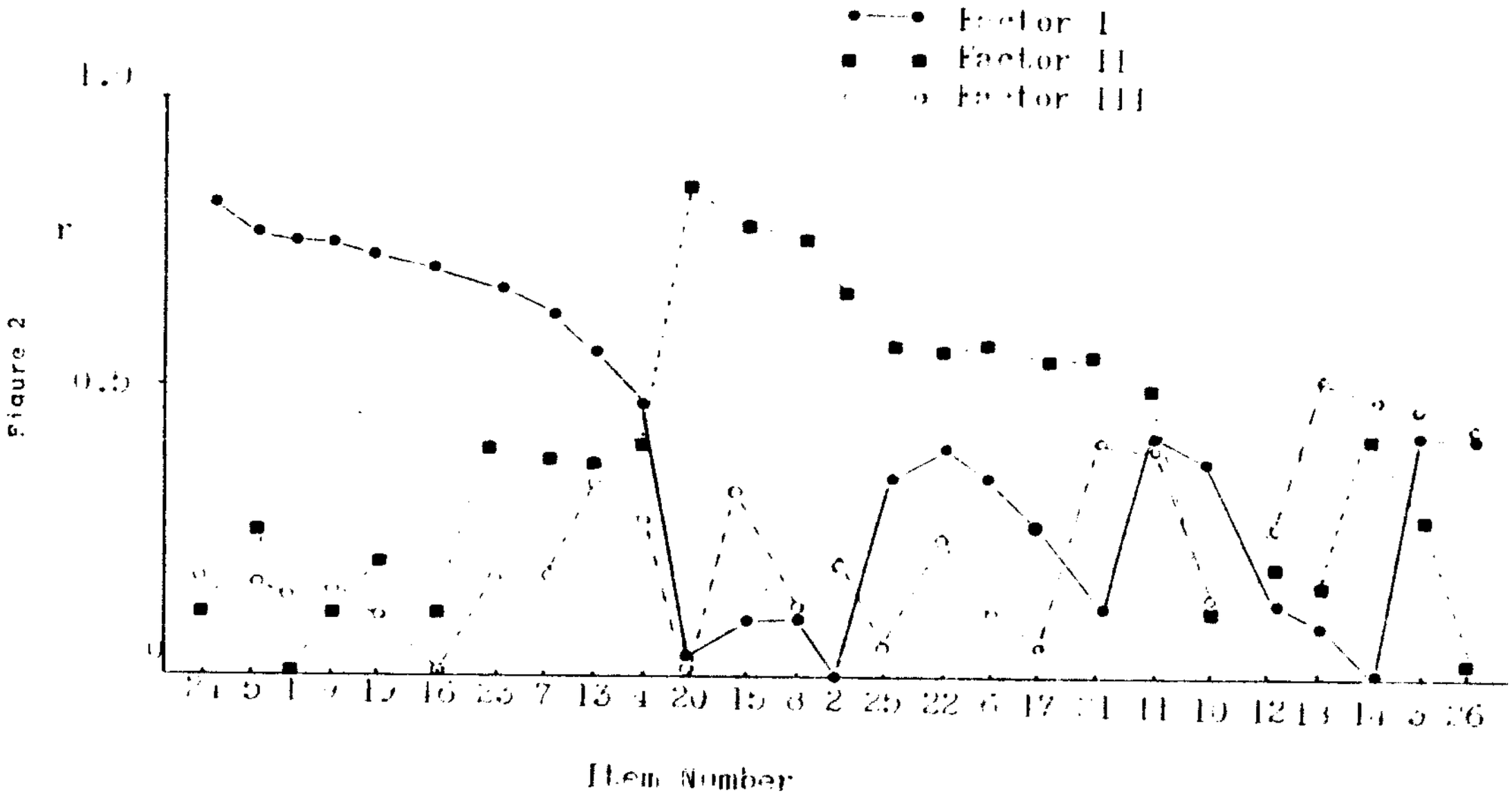

Factor I
Factor II
Factor III
1.0
r
0.5
0
Figure 2
21 5 1 9 19 16 23 7 13 4 20 15 8 2 25 22 6 17 24 11 10 12 18 14 3 26
Item Number

TABLE 1

Correlational Matrix for Sociometric Scores

Crossed with Teacher Ratings*

item number	(+)affect	(-)affect	(+)nom.	(-)nom.
1	.36	-.42	---	-.38
2	.16	-.15	.23	---
3	.34	-.40	.21	-.25
4	.30	-.38	.21	-.30
5	.37	-.42	.14	-.35
6	.30	-.32	.23	-.17
7	.36	-.39	.17	-.22
8	.27	-.20	.24	---
9	.34	-.41	---	-.28
10	.35	-.39	.24	-.22
11	.33	-.34	.26	-.21
12	.19	-.20	.17	-.15
13	.30	-.40	---	-.26
14	.14	-.16	.20	-.21
15	.26	-.22	.26	---
16	.36	-.30	.20	-.21
17	.23	-.17	.18	---
18	---	-.17	.11	-.15
19	.31	-.40	.13	-.33
20	---	.02	.21	---
21	.24	-.24	.29	---
22	.34	-.24	.29	-.21
23	.33	-.34	.20	-.25
24	.42	-.44	.13	-.38
25	.31	-.32	.15	-.15
26	.33	-.35	.20	-.22

* $p < .05$, insignificant correlations have been deleted

see Appendix 2 for identification of items

Intercorrelational Matrix for Revised Form A

Item Number

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1			41	18	[illegible]	[illegible]	41	11	45	09	37	19	45		--	54	1[illegible]	1[illegible]	5[illegible]		13	3[illegible]	[illegible]1	4[illegible]	
2			2[illegible]	3[illegible]	19	41	2[illegible]	[illegible]0	-	35	45	29	30	4[illegible]	[illegible]5		4[illegible]	[illegible]0	1[illegible]	[illegible]1	1[illegible]	4[illegible]	4[illegible]	-	3[illegible]	
3				[illegible]1	[illegible]5	4[illegible]	3[illegible]	[illegible]1	1[illegible]	[illegible]0	53	4[illegible]	[illegible]7	[illegible]1	[illegible]1	1[illegible]	[illegible]0	4[illegible]	3[illegible]	[illegible]1	1[illegible]	1[illegible]	[illegible]0[illegible]	1[illegible]	[illegible]1	
4					[illegible]0[illegible]	[illegible]2	[illegible]3	4[illegible]	3[illegible]	5[illegible]	56	2[illegible]	5[illegible]	4[illegible]	[illegible]1	41	1[illegible]	2[illegible]	3[illegible]	3[illegible]	1[illegible]	4[illegible]	[illegible]0	3[illegible]	[illegible]0	
5						[illegible]1	41	2[illegible]	4[illegible]	[illegible]1	53	1[illegible]	4[illegible]	11	34	[illegible]2	4[illegible]	2[illegible]	4[illegible]	31	[illegible]2	[illegible]4	[illegible]0	4[illegible]	[illegible]1
6							[illegible]2	4[illegible]	[illegible]1	[illegible]0	54	34	18	1[illegible]	34	43	11	2[illegible]	11	4[illegible]	[illegible]0	2[illegible]	4[illegible]	41	[illegible]1
7	1	[illegible]						51	[illegible]1	[illegible]2	53	2[illegible]	5[illegible]	1[illegible]	2[illegible]	44	4[illegible]	31	41	3[illegible]	1[illegible]	5[illegible]	4[illegible]	[illegible]1	1[illegible]	[illegible]1
8	[illegible]	[illegible]							2[illegible]	3[illegible]	4[illegible]	[illegible]1	41	1[illegible]	[illegible]0	1[illegible]	[illegible]0[illegible]	2[illegible]	41	4[illegible]	3[illegible]	[illegible]4	[illegible]4	1[illegible]	[illegible]1	[illegible]1
9	[illegible]	2[illegible]								3[illegible]	11	1[illegible]	[illegible]3	[illegible]1	4[illegible]	[illegible]2	3[illegible]	4[illegible]	4[illegible]	2[illegible]	4[illegible]	1[illegible]	3[illegible]	4[illegible]	[illegible]1	
10	[illegible]	1[illegible]									53	3[illegible]	44	40	2[illegible]	4[illegible]	3[illegible]	4[illegible]	4[illegible]	3[illegible]	[illegible]0[illegible]	[illegible]4	[illegible]1	[illegible]1	[illegible]1
11		11										3[illegible]	4[illegible]	[illegible]1	[illegible]2	1[illegible]	[illegible]1	2[illegible]	4[illegible]	4[illegible]	4[illegible]	5[illegible]	3[illegible]	4[illegible]	[illegible]1
12	[illegible]	1[illegible]											33	[illegible]1	3[illegible]	41	2[illegible]	[illegible]1	1[illegible]	4[illegible]	3[illegible]	3[illegible]	3[illegible]	[illegible]1	[illegible]1
13	[illegible]	1[illegible]												3[illegible]	[illegible]0	44	4[illegible]	43	[illegible]1	3[illegible]	4[illegible]	4[illegible]	[illegible]1	[illegible]1	
14	[illegible]	1[illegible]													[illegible]1		2[illegible]	14	11	4[illegible]	[illegible]1	4[illegible]	2[illegible]		[illegible]1
15	[illegible]	1[illegible]														3[illegible]	4[illegible]	3[illegible]	2[illegible]	4[illegible]	4[illegible]	4[illegible]	3[illegible]	[illegible]1	[illegible]1
16	[illegible]	1[illegible]															44	[illegible]2	1[illegible]	2[illegible]	3[illegible]	[illegible]4	[illegible]1	[illegible]1	[illegible]1
17	[illegible]	1[illegible]																2[illegible]	3[illegible]	5[illegible]	4[illegible]	4[illegible]	3[illegible]	[illegible]1	1
18	[illegible]	1[illegible]																	3[illegible]	4[illegible]	4[illegible]	4[illegible]	3[illegible]	[illegible]1	
19	[illegible]	1[illegible]																		4[illegible]	4[illegible]	4[illegible]	3[illegible]	[illegible]1	
20	[illegible]	1[illegible]																			4[illegible]	4[illegible]	3[illegible]	[illegible]1	
21	[illegible]	1[illegible]																				4[illegible]	3[illegible]	[illegible]1	
22	[illegible]	1[illegible]																					4[illegible]	[illegible]1	
23	[illegible]	1[illegible]																						[illegible]1	
24	[illegible]	1[illegible]																							
25	[illegible]	1[illegible]																							

TABLE 2

All correlations multiplied by a factor of ten

Non-significant correlations ($p > .05$) have been deleted

See Appendix 2 for identification of items

TABLE 3

Highest Factor Loadings on the Factors

From the Teacher Rating Scale

FACTOR I AGGRESSION

Item Number	Description	Loading
24	fights with others	.83
5	is defiant in the classroom	.77
1	teases other children	.76
9	verbally threatens other children	.76
19	destroys other's property	.74
16	hits, kicks, bites other children	.73
23	doesn't take turns using materials or toys	.69
7	doesn't share toys,games, materials	.67

FACTOR II ISOLATION

20	doesn't talk to other children	.82
15	is apathetic and withdrawn	.77
8	plays alone	.75
2	waits to be approached by others	.68
25	is not affectionate	.61
22	is miserable, tearful, unhappy or distressed	.60
6	frowns or grimaces	.60
17	ignores overtures from other children	.60
21	doesn't keep trying when playing games	.60

FACTOR III DEPENDENCE

12	appeals to teacher for help in conflict situations	.74
18	seeks to be near teacher	.65
14	is fearful and/or afraid of new things	.57

TABLE 4

Group Means of Discriminant (Canonical) Scores

Group Number	Factor I	Factor II
1	-.54849	.15905
2	-.47664	-.05532
3	.19369	-.06081
4	.76685	.11185
5	.16098	-.14940

Group 1 = Positive Stars

Group 2 = Positives

Group 3 = Negatives

Group 4 = Negative Stars

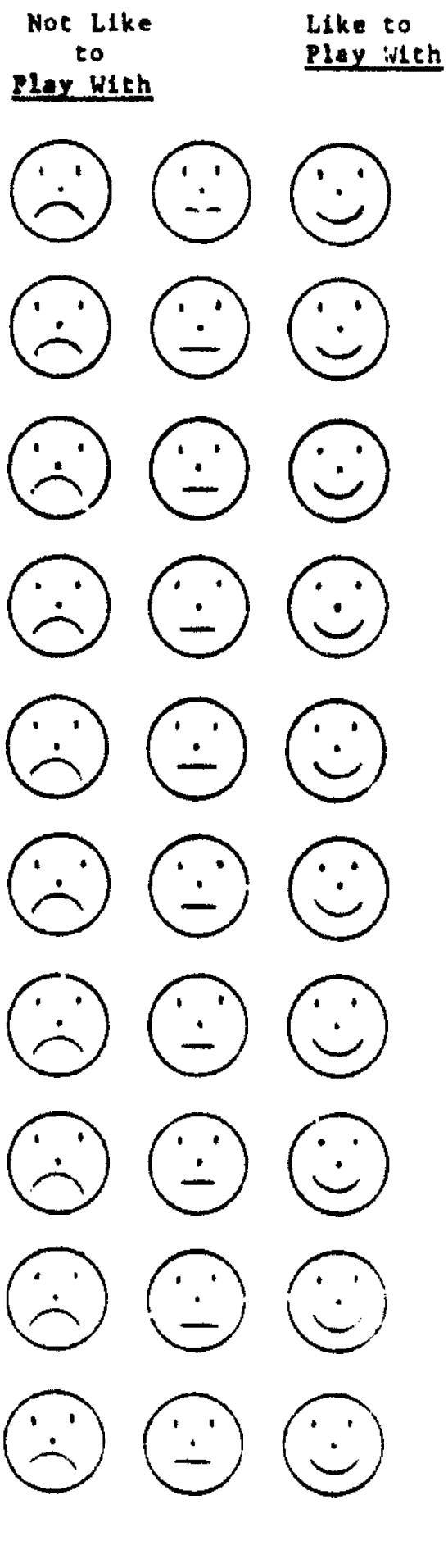
Group 5 = Isolates

Factor I = Aggression

Factor II = Isolation

Appendix 1

Name_____



Appendix 2

TEACHER RATING SCALE

Teacher's Name_____ Child's Name_____

Date_____ Race_____

School_____

Rating Instructions

The following items deal with the child's behavior at school. Please complete each item based on your own observations and impressions of the child during the past month.

1.	teases other children	1	2	3	4	5	does not tease other children
2.	waits to be approached by others	1	2	3	4	5	initiates interactions with classmates
3.	is distracted from schoolwork	1	2	3	4	5	concentrates during class
4.	is secretive about his or her activities	1	2	3	4	5	is open and honest with others
5.	is defiant in the classroom	1	2	3	4	5	is cooperative and compliant in the classroom
6.	frowns or grimaces	1	2	3	4	5	smiles
7.	does not share toys, games, materials	1	2	3	4	5	shares toys, games, materials
8.	plays alone	1	2	3	4	5	plays with other children
9.	verbally threatens other children	1	2	3	4	5	does not verbally threaten other children
10.	is "tuned out"	1	2	3	4	5	is alert
11.	is not helpful to other children	1	2	3	4	5	is helpful to other children
12.	appeals to teacher for help in conflict situations	1	2	3	4	5	solves conflict situations on his or her own
13.	does not listen to other children when they are speaking to him or her	1	2	3	4	5	listens to other children when they are speaking to him or her
14.	is fearful and/or afraid of new things	1	2	3	4	5	is not fearful and/or afraid of new things

Teacher Rating Scale (cont.)

15.	is apathetic and withdrawn	1	2	3	4	5	shows interest and participates
16.	hits, kicks, bites other children	1	2	3	4	5	does not hit, kick, bite other children
17.	ignores overtures from other children	1	2	3	4	5	accepts approaches by other children
18.	seeks to be near teacher	1	2	3	4	5	is independent of teacher
19.	destroys others' property	1	2	3	4	5	respects others' property
20.	does not talk to other children	1	2	3	4	5	talks to other children
21.	does not keep on trying when playing in games	1	2	3	4	5	keeps on trying when playing games
22.	is miserable, tearful, unhappy or distressed	1	2	3	4	5	is content and happy
23.	does not take turns using materials or toys	1	2	3	4	5	takes turns using materials or toys
24.	fights with other children	1	2	3	4	5	does not fight with other children
25.	is not affectionate	1	2	3	4	5	is affectionate
26.	tattles on other children	1	2	3	4	5	does not tattle on other children

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